

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended): A method for coordinating the use of beam forming between ~~two physically separate communicating entities~~ a base station and a wireless transmit/receive unit (WTRU) wherein control information regarding the use of beam forming is not communicated between the base station and the WTRU ~~two entities~~, the method comprising the steps of:

selecting one of the base station and the WTRU ~~two communicating entities~~ for reduction of the amount in which the selected base station or WTRU entity will adjust its beam in response to misalignment between beams emanating from the base station and the WTRU ~~two entities~~;

measuring an error in the alignment of the beams emanating from the base station and the WTRU ~~two communicating entities~~;

determining a correction factor based on the measured error;

selecting at least one adjustment parameter for adjusting the beam of the selected base station or WTRU entity; and

adjusting the beam of the selected base station or WTRU entity using the selected adjustment parameter in accordance with the correction factor, whereby the beams emanating from the base station and the WTRU ~~two communicating entities~~ are aligned with respect to each other.

2. Cancelled

3. (Currently amended): The method of claim 1 wherein the base station is a WTRU ~~two communicating entities are two WTRUs.~~

4. (Original): The method of claim 1 wherein the at least one adjustment parameter is selected from the group consisting of boresight orientation, beam width, and power gain.

5. (Original): The method of claim 1 further comprising the step of:  
repeating the measuring and adjusting steps until the error measured is below a predetermined value.

6. (Currently amended): A method for coordinating the use of beam forming between ~~two physically separate communicating entities~~ a base station and a wireless transmit/receive unit (WTRU) wherein control information regarding the use of beam forming is communicated between the base station and the WTRU ~~two entities~~, the method comprising the steps of:

measuring an error in the alignment of beams emanating from the base station and the WTRU ~~two communicating entities~~;

selecting at least one adjustment parameter for the base station ~~a first of the two communicating entities~~;

identifying a first correction factor for the base station ~~first entity~~;

selecting at least one adjustment parameter for the WTRU ~~a second of the two communicating entities~~;

identifying a second correction factor for the WTRU ~~second entity~~; and

adjusting the beam of the base station and the WTRU ~~two communicating entities~~ in an amount equal to the measured error multiplied by the ~~entities'~~ respective correction factors in the base station and the WTRU such that the two beams emanating from the base station and the WTRU ~~two communicating entities~~ are aligned with respect to each other.

7. (Currently amended) The method of claim 6 wherein ~~the two communicating entities are a base station and a WTRU~~ the correction factor of the base station is zero thereby causing the base station to refrain from adjusting its beam.

8. (Currently amended): The method of claim 6 wherein the base station is a WTRU ~~two communicating entities are two WTRUs.~~

9. (Currently amended): The method of claim 6 wherein the correction factor of the WTRU ~~one entity~~ is zero thereby causing said the WTRU entity to refrain from adjusting its beam.

10. (Currently amended): The method of claim 6 wherein the at least one adjustment parameter for the ~~first~~ base station entity is selected from the group consisting of boresight orientation, beam width, and power gain.

11. (Currently amended): The method of claim 6 wherein the at least one adjustment parameter for the ~~second~~ WTRU entity is selected from the group consisting of boresight orientation, beam width, and power gain.

12. (Currently amended): A method for coordinating the use of beam forming between a base station and a wireless transmit/receive unit (WTRU) ~~two physically separate communicating entities~~, the method comprising the steps of:

selecting a first correction factor and a first adjustment parameter for ~~each of~~ the base station and the WTRU ~~entities~~ for use in the azimuth dimension wherein the sum of the two first correction factors is equal to one;

selecting a second correction factor and a second adjustment parameter for ~~each of~~ the base station and the WTRU ~~entities~~ for use in the elevation dimension wherein the sum of the two second correction factors is equal to one;

measuring an error in the alignment of beams emanating from the base station and the WTRU ~~two communicating entities~~ in the azimuth dimension;

measuring an error in the alignment of beams emanating from the base station and the WTRU ~~two communicating entities~~ in the elevation dimension;

adjusting the beam of both the base station and the WTRU ~~entities~~ using the two first adjustment parameters according to ~~both entities'~~ the respective first correction factors in both the base station and the WTRU where an error is detected in the azimuth dimension; and

adjusting the beam of both the base station and the WTRU ~~entities~~ using the two second adjustment parameters according to their respective second correction factors where an error is detected in the elevation dimension, whereby the two beams emanating from the base station and the WTRU ~~two communicating entities~~ are aligned with respect to each other.

13. (Original): The method of claim 12 wherein the two first adjustment parameters are selected from the group consisting of boresight orientation, beam width, and power gain.

14. (Currently amended): The method of claim 13 wherein the two first adjustment parameters are the same for both the base station and the WTRU entities.

15. (Currently amended): The method of claim 13 wherein the two first adjustment parameters are different for both the base station and the WTRU entities.

16. (Original): The method of claim 12 wherein the two second adjustment parameters are selected from the group consisting of boresight orientation, beam width, and power gain.

17. (Currently amended): The method of claim 16 wherein the two second adjustment parameters are the same for both the base station and the WTRU entities.

18. (Currently amended): The method of claim 16 wherein the two second adjustment parameters are different for both the base station and the WTRU entities.

19. (Currently amended): A method for coordinating the use of beam forming between ~~two physically separate communicating entities~~ a base station and a wireless transmit/receive unit (WTRU) wherein control information regarding the use of beam forming is communicated between the base station and the WTRU ~~two~~ entities, the method comprising the steps of:

selecting a correction factor and at least one adjustment parameter for each of the base station and the WTRU entities;

measuring, at each base station and WTRU entity, an error in the alignment of beams emanating from the base station and the WTRU ~~two communicating entities~~; and

adjusting the beams using the selected adjustment parameters according to the ~~two entities' respective~~ correction factors in the base station and the WTRU and the measured error.

20. (Original): The method of claim 19 wherein the at least one adjustment parameter is selected from the group consisting of boresight orientation, beam width, and power gain.

21. (Original): The method of claim 19 wherein the at least one adjustment parameter is a plurality of adjustment parameters.

22. (Original): The method of claim 21 wherein the plurality of adjustment parameters are selected from the group consisting of boresight orientation, beam width, and power gain.

23. (Currently Amended): A wireless communication system wherein beams may be adjusted to enhance wireless communications between ~~physically separate wireless entities~~ a base station and a wireless transmit/receive unit (WTRU) operating in the system, the wireless communication system comprising:  
a plurality of base stations and WTRUs ~~wireless entities, said the base stations and WTRUs entities~~ being capable of communicating using beam formed

transmission and reception patterns and including a processor for measuring an error in the alignment of their own beam and the beam of another WTRU entity with which they are communicating and for determining a correction factor based on the measured error; and

wherein at least one of the base stations or WTRUs ~~two communicating wireless entities~~ selects at least one adjustment parameter in accordance with the correction factor for adjusting its beam a fraction of the error measured in the alignment of its beam with respect to the beam of the other base station or WTRU wireless entity.

24. (Currently amended): The wireless communication system of claim 23 wherein the processor of the at least one base station or WTRU ~~communicating wireless entity~~ is configured to adjust the beam of the at least one base station or WTRU wireless entity in an amount equal to the fraction multiplied by the error measured.

25. (Currently amended): The wireless communication system of claim 23 wherein the processor of the at least one base station or WTRU ~~communicating wireless entity~~ is configured to select at least one adjustment parameter for performing said adjustment.

26. (Original): The wireless communication system of claim 25 wherein the at least one adjustment parameter is selected from the group consisting of boresight orientation, beam width, and power gain.

27. (Currently Amended): A wireless transmit/receive unit (WTRU)

configured to maintain alignment of its beam with the beam of another base station ~~physically separate wireless entity~~ with which the WTRU is communicating, the WTRU comprising:

a first processor configured to measure an error in the alignment of a first beam emanating from the WTRU and a second beam emanating from the other base station ~~wireless entity~~;

wherein the first processor is further configured to determine a correction factor based on the measured error and to select at least one adjustment parameter for adjusting the first beam in accordance with the correction factor; and

a second processor configured to compute a first fraction and adjust the first beam using the at least one selected parameter in an amount equal to the first fraction multiplied by the error measured.

28. (Original): The WTRU of claim 27 further comprising:

a transmitter configured to transmit the fraction of the measured error that the WTRU will adjust its beam to the base station ~~wireless entity~~ with which the WTRU is communicating.

29. (Original): The WTRU of claim 28 further comprising:

a receiver configured to receive, from the base station ~~wireless entity~~ with which the WTRU is communicating, a second fraction with which the base station ~~entity~~ used to adjust its beam; and

wherein when a second fraction is received, the second processor being configured to compute the first fraction by subtracting one minus the second fraction and adjusting the first beam in an amount equal to the first fraction multiplied by the error measured.



30. (Currently amended): The WTRU of claim 29 wherein the base station ~~wireless entity~~ with which the WTRU is communicating is another WTRU.

31. Cancelled

32. (Original): The WTRU of claim 27 wherein the at least one adjustment parameter is selected from the group consisting of boresight orientation, beam width, and power gain.

33. (Currently amended): A method for coordinating the use of beam forming between ~~two physically separate communicating entities~~ a base station and a wireless transmit/receive unit (WTRU), the method comprising the step of:

reducing at least one adjustment parameter of a beam transmitted from ~~of~~ at least one of the base station or the WTRU ~~two communicating entities~~ communicating with each other using beamed formed transmission and reception signals wherein a degree of alignment between beams emanating from the base station and the WTRU ~~two entities~~ is above a predetermined level for a predetermined length of time.

34. (Original): The method of claim 33 wherein the at least one adjustment parameter that is reduced is beam width.

35. (Original): The method of claim 33 wherein the at least one adjustment parameter that is reduced is power gain.

**Applicant:** Chotkowski et al.  
**Application No.:** 10/731,760

36. (Original): The method of claim 33 wherein the at least one adjustment parameter that is reduced is beam width and power gain.

37. (New) The method of claim 33 wherein the base station is a WTRU.